

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Applicants note with appreciation the Examiner's withdrawal of the earlier rejections and the indication of allowable subject matter in claims 4-6, 11-13, 18-21, 29, 30, 33, and 34.

The Examiner notes several informalities in claims 1, 17, and 30 and makes several grammatical type suggestions which have been incorporated by amendment. None of these amendments are narrowing or surrender any subject matter.

Claims 1, 9, 14, and 22 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite. Specifically, the Examiner alleges that it is "unclear how or what form does a 'lost signal' send...A lost signal is just a signal, and it must be incorporated into some form of message or packet." The Examiner also wants the negative acknowledgement signal explicitly labeled as a signal. Regarding the latter, a person of ordinary skill in the art would certainly understand that a negative acknowledgement, in the context of packet data communications, is a signal. Thus, the term "signal" has been incorporated in several places where it was already implied. Similarly, a person of ordinary skill in the art would certainly have understood that the "lost signal" referred to in the independent claims, particularly in the context of the specification, is a signal or message that indicates that the data packet was detected as either not received or absent. That would have been understood by a person of ordinary skill in the art having read the specification. The independent claims now recite explicitly a definition for "lost signal." None of these amendments narrows the subject matter of the claims or surrenders subject matter. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph is respectfully requested.

Claims 1, 3, 7, 8, 10 and 32 stand rejected under 35 U.S.C. §103 as being unpatentable over newly-cited U.S. Patent 6,434,114 to Jain in view of newly-cited U.S. Patent 6,640,325 to Fischer. This rejection is respectfully traversed.

The rejection of claims 10 and 32 is improper since claim 10 depends from independent claim 9 which is not rejected based upon the combination of Jain in view of Fischer but rather, as noted in numbered paragraph 5, is rejected based upon Jain, Fischer, and Osthoff. Similarly, claim 32 does not depend from claim 1, but rather depends from claim 22, which is not rejected in paragraph 4. Instead, claim 22 is rejected in paragraph 6 based upon a combination of Ayanoglu in view of Jain. Withdrawal of the rejection of claims 10 and 32 is therefore respectfully requested.

Jain discloses a system for enhancing an intelligent network service after a data flow has been established. The focus of Jain is not on distinguishing between lost data packets and erroneously received data packets, but rather on how to "install the service specific features to the flow, i.e., after call set up." Column 3, lines 21-22. The Examiner focuses on the text in column 4, beginning at line 45, which explains that if a packet is lost at a terminating switch 25, a retransmission request is sent from a second intermediate switch 24. Unlike claim 1, Jain fails to distinguish between detecting an error in an actually received data packet and sending a negative acknowledgement signal and detecting the absence of a data packet and sending a lost signal. In Jain there are only lost packets. No distinction is made between a packet that is never received and a packet that is received erroneously.

The Examiner admits there are deficiencies in Jain and turns to Fischer which discloses sending negative acknowledgements in packet communications. Fischer recognizes that "[t]here is a need for a packet error detection and recovery mechanism that operates at a lower layer in

the network protocol stack that reduces the time required to recover from packets lost due to bit errors." Column 1, lines 58-61. Thus, Fischer is just like Jain in that there is no distinction made between an erroneously received packet and a packet that is not received. When a packet or frame is "lost" in Fischer, Fischer means that the packet or frame has been corrupted with an unrecoverable errors. As a result, the receiving node 120:

must drop the frame that has errors in it. The receiving node 120 has higher layers of a network protocol stack that must discover this missing frame and through higher-layer communication request a retransmission for the transmitting node 112.

Column 3, lines 33-37.

Even if Jain or Fischer could be properly combined, their combined teachings fail to disclose all of the features of claim 1. Both Jain and Fischer only recognize one kind of event: in Jain a lost packet and in Fischer an erroneous packet. In both Jain and Fischer, that single event triggers a request for retransmission. There is no distinction between one type of retransmission versus another type of retransmission. In contrast, claim 1 describes that when an error is detected in a received packet, a negative acknowledgement is sent to the transmitter "to trigger a first type of retransmission of the parity bits to be used in a subsequent decoding operation at the receiver." On the other hand, when a data packet is detected as absent, a lost signal message is sent to the transmitter "rather than a negative acknowledgement signal, the lost signal message indicating that the data packet was detected as absent." The lost signal message is a different type of retransmission request that causes the transmitter to send "a second different of retransmission of the information bits of the data packet." In both Jain and Fischer, there is only one type of retransmission request signal and only one type of retransmission in response thereto.

The obviousness rejection is also in error because Jain and Fischer may not be properly combined. Although the Examiner suggest that combining Fischer with Jain would "minimize the overhead cost of the network and time required to recover packet due to lost errors in [sic] reduced," such highly generalized justifications are not explicit motivations to combine. Moreover, Fischer *teaches away* from a combination with Jain. In Fischer, the receiver must receive a packet before it can determine the packet is erroneous, and therefore, before it can send out a request for retransmission in the form of a negative acknowledgement signal. In Jain, a retransmission request is only triggered when a packet is determined to be lost. A received packet, whether correctly-received or erroneously-received in Jain, does not trigger a packet lost retransmission request signal. Thus, Jain and Fischer can not be combined as proposed by the Examiner. The obviousness rejections based upon the combination of Jain and Fischer are improper and should be withdrawn.

Claim 9 stands rejected under 35 U.S.C. §103 as being unpatentable over Jain and Fischer and further in view of WO 98/05140 to Osthoff. This rejection is respectfully traversed.

Commonly-assigned Osthoff discloses error correction of erroneously-received data packets where the transmitter successively sends more parity bits when requested by the receiver. Each set of additional parity bits is based on the original parity bits but reordered differently for each additional parity request. Osthoff fails to remedy the deficiencies noted above with respect to the combination of Fischer and Jain.

None of the references discloses "sending a negative acknowledgement signal to trigger a first type of retransmission of the parity bits" when the interim decoding result is at above the threshold coupled with "sending a lost signal message rather than a negative acknowledgment signal to trigger a second type of retransmission of the information bits of the data packet, the

second type of retransmission being different from the first type of retransmission," if the interim decoding result is not above the threshold. And as already explained above, the combination of Jain, and Fischer is improper as a matter of law. The obviousness rejection based on the combination of Jain, Fischer and Osthoff should be withdrawn.

Claims 14, 17, 22, and 23 stand rejected under 35 U.S.C. §103 as being unpatentable over previously-applied Ayanoglu and Jain. This rejection is respectfully traversed.

Ayanoglu has already been discussed and distinguished in the prior response. Ayanoglu discloses two types of parity bits checking bits, but fails to disclose or suggest, as the Examiner admits, generating and sending two different types of signals including a negative acknowledgement signal and a lost signal message. Although Ayanoglu retransmits additional parity bits for erroneous data words, Ayanoglu fails to retransmit systematic information bits when a lost signal is received or when no acknowledgment or negative acknowledgment is received. Recognizing deficiencies in Ayanoglu, the Examiner turns to Jain, which as described above, discloses sending a retransmission request when a packet is lost.

Again, this combination, even if it were permitted, fails to disclose all of the features recited in independent claim 14. For example, their combined teachings fail to disclose sending "a first of retransmission with parity bits," when a negative acknowledgement signal is received, coupled with sending "a second type of retransmission with a systemic information bits," when a lost signal message is received or no acknowledgement signal or negative acknowledgement signal is received. Both Ayanoglu and Jain have one type of retransmission message.

The combination of Ayanoglu and Jain is also improper as a matter as a matter of law. Ayanoglu *teaches away* from the hindsight combination proposed by the Examiner because Ayanoglu requires that a transmission block be received before any type of retransmission

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request is sent back to the transmitter. The obviousness rejection based upon Ayanoglu and Jain is improper and should be withdrawn.

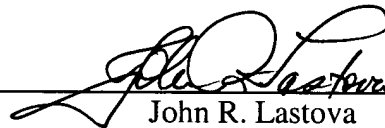
Claim 22 incorporates the allowable subject matter of claim 33. Therefore, claim 22 and its dependent claims should be allowed.

The application is now in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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